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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,967	09/26/2005	Heinrich Franz Bartosik	AT 030013	6112

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EXAMINER

PULLIAS, JESSE SCOTT

ART UNIT	PAPER NUMBER
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2626

MAIL DATE	DELIVERY MODE
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02/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/550,967	BARTOSIK ET AL.
	Examiner	Art Unit
	JESSE S. PULLIAS	2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 26 September 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-16 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 26 September 2005 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/14/2007</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Drawings

1. The drawing is objected to because there are no textual labels. The examiner requests correction.

Claim Objections

2. Claim 5 objected to because of the following informalities: "determine" should be "determines". Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 3, 5, 6-9, 12, and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "where appropriate" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 3, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 5 recites the limitations "the cursor position" and "the marking information" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the time position" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 7, the phrases "in particular" and "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). For the purposes of examination, the examiner will assume "in particular" to mean "including" and will not give weight to the examples following "such as".

Claim 8 recites the limitation "the text element replacements" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the frequency" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the time positions" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Additionally, the term "sufficiently close" in line 5 is a relative term which renders the claim indefinite. The term "sufficiently close" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 16 recites the limitation "the correction" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction of all listed claims is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-8, 13, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Mishelevich et al. (WO 01/31634).

Consider claim 1, Mishelevich discloses a speech recognition and correction system (**p1, lines 6-8**) which comprises at least one speech recognition device (**p6, lines 14-20, Fig 4 Processor includes SR Engine and SR Interface**) to which a spoken text can be fed, it being possible for said spoken text to be transcribed into a recognized text, and a correction device (**p15 lines 12-31, Fig 10 proofreading device**) for correcting the text recognized by the at least one speech recognition device,

said correction device being connected to the at least one speech recognition device via a data network (**p13 lines 4-8 the Internet**) for the transmission of the recognized text and where appropriate of the spoken text , characterized in that the correction device has a lexicon of alternatives (**p15 lines 21-22, list box 1012**) which contains word parts, words and word sequences (**p15 lines 25-28 particular word or phrase**) that can be displayed (**p15 lines 25-26, words are shown on the interface**) by the correction device as alternatives to individual word parts, words and word sequences of the recognized text.

Regarding claim 2, it contains the correction device of claim 1, and is rejected similarly according to the reasons of claim 1.

Consider claim 7, Mishelevich discloses a method of creating a lexicon of alternatives (**Fig 11, p16 lines 1-9**) for determining data record entries for a list of alternatives for the correction of recognized text which has been transcribed from spoken text by a speech recognition device,

characterized in that sources of knowledge (**p 16 lines 2-9**, Data is input, categorized voice recognition segments) that are independent of the speech recognition device, including text files specific to the field of application, (**p 16 lines 2-9** data is put into specific categories including patient history, cardiovascular, etc. The usage of text files is implied since storage of soundex codes requires a text file.)

are examined with respect to text elements, (**p16 lines 2-9**, data is categorized according to text elements) and

such text elements that can be confused with one another (**p16 lines 1-2**, phonetically similar items can be confused with one another) are put together as alternatives in a data record entry of the list of alternatives (**p16 lines 1-2, p15 lines 21-22**, the confusable text elements are put together in a list (a data record entry) of alternatives).

Consider claim 3, Mishelevich discloses a the device is characterized by analysis means (**Fig 4, Text Processor 424** is an analysis means since it processes text) for analyzing selected text passages of the recognized text, preferably by means of

character chain comparison or syntactic analysis, and for determining alternatives to the selected text passages from the lexicon of alternatives.

Regarding claim 4, Mishelevich discloses that the analysis means can be activated by a user of the correction device. (**p14 lines 20-23**, the system is operated by a proofreader)

With respect to claim 5, Mishelevich further discloses the analysis means determines selected text passages from the cursor position or the marking information of a text processing program. (**p14, lines 4-6**)

Consider claim 6, Mishelevich discloses that the analysis means determines selected text passages from the time position of the spoken text and its association with the recognized text. (**p13 lines 20-24**)

Regarding claim 8, Mishelevich discloses that the text element replacements (**p15 lines 25-28**) made in a corrected text with respect to the original recognized text transcribed by a speech recognition device are determined and recorded as alternatives (**p16 lines 7-9**, the categorized voice-recognition segments contain the text element replacements and are stored, or recorded as alternatives) in data record entries of the lexicon of alternatives. (**p15 lines 21-22** the list is a series of data record entries)

Consider claims 13 and 14, Mishelevich discloses the data record entries of the lexicon of alternatives are subdivided according to speech, and according to technical field. (**p16 lines 1-9**, the words are categorized into categories representing spoken sections during a medical procedure, which are technical fields.)

7. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mishelevich et al. (WO 01/31634) in view of Ortega et al. (6,507,816).

Regarding claims 9 and 10, Mishelivich discloses the feedback of each text element replacement is returned (**p15 lines 7-8**) and the retraining of the speech recognition software is carried out. (**p15 lines 7-8**) Mishelevich also discloses the speech recognition software causes alternatives to words to be displayed. (**p14 lines 11-13**), and recording entries in the lexicon of alternatives (**p16 lines 7-9**. the categorized voice-recognition segments contain the text element replacements and are stored, or recorded as alternatives) thus suggesting, but not specifically teaching, that frequent element replacements are recorded as alternatives.

Mishelevich does not specifically teach the frequency of each text element replacement is statistically evaluated and the recording as an alternative in a data record entry of the lexicon of alternatives is only carried out when a predetermined lower limit value of the frequency, expressed by the absolute number of replacements or the ratio of replacements with respect to the overall number of words examined or

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with respect to the overall occurrence of a given word, is exceeded, or a predetermined upper limit is not reached.

Ortega discloses the frequency of each text element replacement (**Col 4 lines 30-41**, the user selects a text string to replace an incorrect one, **Col 4 lines 44-47** the number of times (frequency) the corrected word (or text element replacement) is used is counted) is statistically evaluated (**Col 5 lines 1-4**, calculating percentages are a statistical evaluation) and the use of a problem solving application to provide suggestions to the speaker (**Col 5 lines 20-22**) is only carried out when a predetermined lower limit value of the frequency, (**Col 5 lines 24-29**, the calculated accuracy ratio is equivalent to the inverse of the number of replacements ratio, therefore the acceptable minimum taught in line 24 is equivalent to a predetermined lower limit on replacements ratio exceeded) expressed by the absolute number of replacements or the ratio of replacements with respect to the overall number of words examined or with respect to the overall occurrence of a given word, is exceeded.

Ortega does not specifically teach the recording as an alternative in the data record entry of the lexicon of alternatives.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Mishelevich by using the replacement frequency evaluations are taught by Ortega to determine when to add a word to the lexicon, in order to solve misrecognition problems as suggested by Ortega (**Col 2 lines 10-15**).

The inventions are analogous because they both include replacing misrecognized words with alternative words.

8. Claim 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Mishelevich et al. (WO 01/31634) in view of Nassif et al. (6,418,410)

Consider claim 11, Mishelevich discloses that the text element replacements (**p15 lines 25-28**) made in a corrected text with respect to the original recognized text transcribed by a speech recognition device are determined and recorded as alternatives (**p16 lines 7-9**, the categorized voice-recognition segments contain the text element replacements and are stored, or recorded as alternatives) in data record entries of the lexicon of alternatives. (**p15 lines 21-22** the list is a series of data record entries)

Mishelevic does not specifically disclose an analysis of the acoustic similarity of text elements and that the recording as an alternative is conditional upon a predetermined measure of phonetic similarity.

Nassif discloses an analysis of the acoustic similarity of the text elements is carried out (**Col 7 lines 2-5**, the audio of the text elements is compared) and the updating the language model (**Col 6 lines 45-50**) is only carried out when a predetermined degree of phonetic similarity is found. (**Col 6 lines 51-58**, the method compares whether a predetermined statistical quality exists by comparing the phonetics.)

Nassif does not specifically teach recording as an alternative in a data record entry of the lexicon of alternatives

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Mishelevich such that an analysis of the acoustic

similarity of the text elements is carried out and the recording as an alternative is only carried out when a predetermined degree of phonetic similarity is found, as taught by Nassif, in order to continually improve accuracy, as suggested by Nassif. (**Col 1 lines 32-37**)

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mishelevich et al. (WO 01/31634) in view of Chen et al. (5,864,805).

Regarding claim 12, Mishelevich discloses that the text element replacements (**p15 lines 25-28**) made in a corrected text with respect to the original recognized text transcribed by a speech recognition device are determined and recorded as alternatives (**p16 lines 7-9**. the categorized voice-recognition segments contain the text element replacements and are stored, or recorded as alternatives) in data record entries of the lexicon of alternatives. (**p15 lines 21-22** the list is a series of data record entries).

Mishelevich does not specifically teach an analysis of the time positions of the text element replacements is carried out and used as a condition for the recording.

Chen discloses an analysis of the time positions of text elements (**Col 3 lines 11-20**, the start and end times of the word) and a candidate words list is derived when for the text element there is a corresponding text element found to be closest using a matching algorithm. (**Col 3 lines 21-23, Col 3 lines 32-39**). Chen also teaches replaced text elements are chosen from the list of alternative words. (**Col 4 lines 40-46**).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Mishelevich by conducting a time position analysis

and conducting the recording only when there is a corresponding text element in close proximity, as suggested by Chen, in order to fix word boundaries problems as mentioned by Chen. (**Col 1, lines 44-46**). The inventions are analogous because they both relate to creating a list of alternatives to correct recognized speech.

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mishelevich et al. (WO 01/31634) in view of Ortega et al. (6,332,122).

Regarding claim 15, Mishelevich discloses column 618 identifies the person recording the data and, in the physician example, this can be either the physician or another medical staff member such as a nurse. (**p8 lines 29-30**)

Although it is implied, Mishelivich does not specifically teach that data record entries of the lexicon of alternatives are subdivided according to author of the original spoken or corrected text.

Ortega discloses a system in which transcribed text is associated with a speaker using a speaker ID. (**Abstract**).

It would have been obvious to one of ordinary skill in the art at the time of the invention to subdivide the data record entries of the lexicon of alternatives taught by Mishelevich according to author of the original spoken or corrected text as taught by Ortega, in order to overcome difficulties in identifying multiple users, as suggested by Ortega. (**Col 1 lines 19-26**). The inventions are analogous because they are both related to creating a list of alternatives to correct speech recognition errors.

11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mishelevich et al. (WO 01/31634) in view of Rozak (5,950,160).

Consider claim 16, Mishelevich discloses the feedback from the proofreader in the form of the selection of particular options of text are used for training the speech recognition software (which generates the list of alternatives), implying, but not specifically teaching that the list of alternatives is adapted online during the correction of recognized texts. (**p15 lines 7-11**)

Rozak specifically teaches the list of alternatives is adapted online during the correction of recognized texts. (**Col 5 lines 54-65**, the vocabulary, which overlaps the list of alternatives, has words added during correction, which makes it online).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Mishelevich to adapt the list of alternatives during correction as taught by Rozak, in order to improve efficiency, as suggested by Rozak. (**Col 1 lines 20-22**).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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13. 5,864,805 Chen et al. disclose a method and apparatus for correcting errors in dictated speech using tables of alternative words.
14. 5,960,447 Holt et al. disclose a recognized word tagging and editing system with linked audio in which replaced words are statistically analyzed.
15. 5,799,273 Mitchell et al. disclose an automated proofreading method in which audio is linked to recognized words to make corrections

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jesse Pullias whose telephone number is 571/270-5135. The examiner can normally be reached on M-F 9:00 AM - 4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571/272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571/270-6135.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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TĀLIVALDIS VARS ŠMITS
PRIMARY EXAMINER